MULTIMEDIA UNIVERSITY

STUDENT IDENTIFICATION NO

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FINAL EXAMINATION

TRIMESTER 2, 2017/2018

BAC4684 – ENTERPRISE RESOURCE PLANNING SYSTEMS

(All sections / Groups)

14 MARCH 2018
2.30pm -5.30pm
(3 Hours)

INSTRUCTIONS TO STUDENT

1. This Question paper consists of 6 pages with 4 Questions only.
2. Attempt **ALL** questions in Section A and Section B. The distribution of the marks for each question is given.
3. Please write all your answers in the Answer Booklet provided.

SECTION A: CASE STUDY

Air Cargo's e-Enterprise System

Air Cargo Inc. (ACI) is a logistics management company providing air cargo ground services to 17+ shareholder airlines and 53 associates, including a road feeder service that connects airports and cities in the United States and Europe, pickup and delivery of regular air cargo shipments. A major system crash in the late 1990s caused ACI's revenue to drop from about $150 million to about $145 million; this served as a wake-up alarm for management and started their systems integration effort with e-Enterprise system.

ACI runs various business applications for dispatching, invoicing, freight audits, and reconciliation. Before converting to ERP, ACI's accounting staff had to export and import text files to communicate across accounting and business applications. This took time and made even the most recent report slightly dated. ACI initially considered simply upgrading its existing accounting system to a new release; however, Jack Downing, ACI's IT Director, decided this approach was not feasible because they had developed numerous custom procedures in their accounting and other business applications. "An upgrade wouldn't have been economical," he explained, "because we had made so many custom changes to the old software."

ACI therefore implemented four e-Enterprise applications-its financial series, distribution series, customized series, and integration series – and integrated them with a database management system, Microsoft SQL Server, at the back end. In addition, ACI used the Microsoft transformation services. The immediate effect of this implementation was the integration of the accounting system with the line-of-business applications, thereby eliminating the manual data re-entry. This occurred because Microsoft SQL Server and the Data Transformation Services (DTS) software connected to ACI's line-of-business applications and delivered transaction data to the ACI e-Enterprise system. DTS software is an extract, transform and load (ETL) tool which consolidates data from disparate sources to single or multiple destinations. These data were used to update the financial records. Note that DTS runs in the background on a regular basis without requiring manual intervention. As a result, the accounting department no longer needs to export and import line-of-business records manually to generate its reports.

The key advantage of the e-Enterprise system is that it links contracts managed in the line-of-business applications to financial records. "Once we agree on rates, terms, and hours of operation with a contractor, they are entered into our contracts administration system," says Sally Hartmann, ACI's CFO. "In the past, we had to re-enter that information into the financial system manually and hope that we remembered to adjust it if there were changes in the contract. But now, we automatically move this information from the accounting system to the contract management system. And we have the ability to move that information in the other direction as well, which we didn't have in the past."

Continued...

The key benefit here is that if a contractor stops paying its bills, the warehouse system will immediately alert the dispatch people. Hartmann add: "We are also completing a direct link from our human resources to our accounting system. This will eliminate another area of manual data entry and reduce the potential for errors."

Hartman ultimately sees three other advantages accruing to ACI from this ERP conversion. These are as follows:

- "Based on what I have seen so far, I am estimating that we will reduce our administrative workload by 10 percent, primarily by reducing manual data entry."
- "With the ERP system, we will provide more accurate, complete and timely information to decision makers."
- We are moving heavily into e-commerce, and e-Enterprise provides the building blocks that enable two-way information flow between e-business and financial systems."

The ACI case highlights some of the problems with heterogeneous systems and how they can affect the various departments within the company from Accounting to Warehousing. The systems integration at ACI has introduced some benefits and drawbacks.

Source: Adapted from Financial Executive's News, June 2002, p.8. www.loma.com; Ed McKenna. (December 13, 2004)

QUESTION 1

a) The Air Cargo story above is a clear example of functional silos. What are functional silos and how did they evolve in organizations? (10 marks)

b) Referring to the Air Cargo case above; discuss the information silo problem at ACI and how it was solved via the e-Enterprise system. (10 marks)

c) Discuss both short-term and long-term benefits of the e-Enterprise system to Air Cargo. (10 marks)

d) Why do you think functional silos are not appropriate for today's organizations? Discuss your answer from organizational and technical perspectives. (10 marks)

(Total: 40 marks)

Continued...

SECTION B: ESSAY

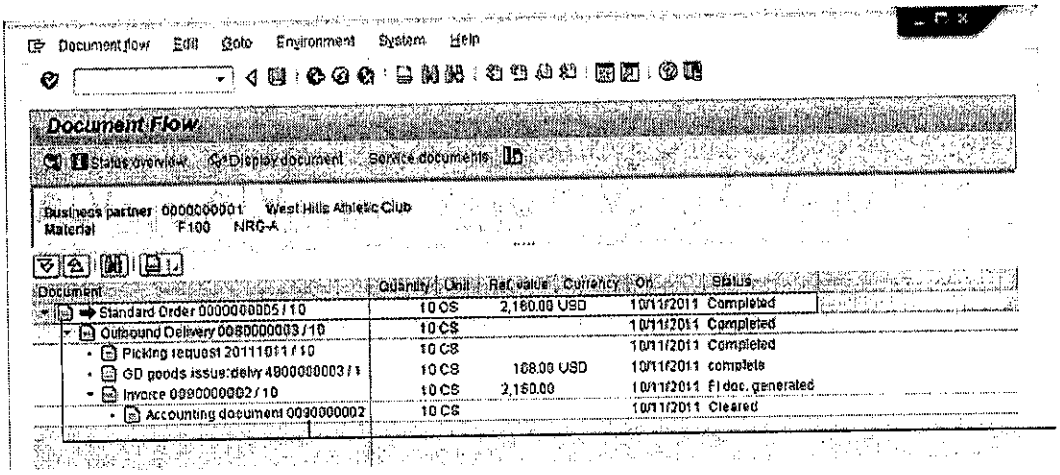
Attempt **ALL** questions.

QUESTION 2

a) Besides the fact that Enterprise Resource Planning systems are integrated information systems and lead to more efficient business process, there are some drawbacks. Explain **THREE (3)** of them. (9 marks)

b) Most of the companies have been revolved around business functions for decades. However, due to ERP implementation recently, companies have started to change their methods of doing business to business process. Define *business process* and discuss the significance of this method to the companies. (5 marks)

c)



Based on the figure above, what is the important of this screen to auditors of a company?

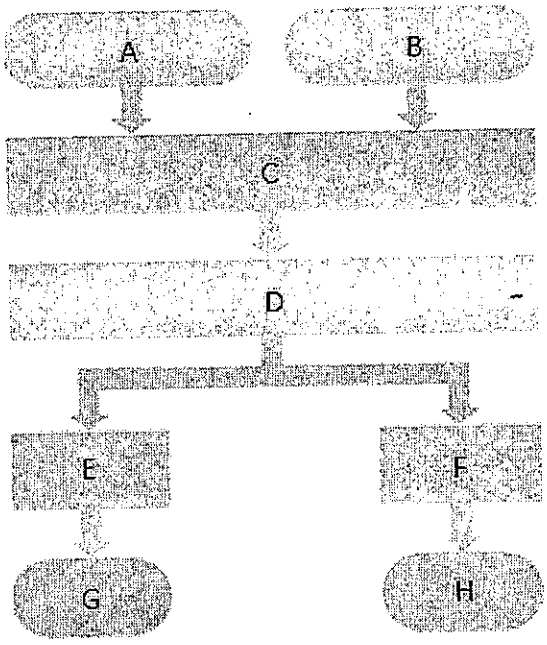
(6 marks)

(Total: 20 marks)

Continued...

QUESTION 3

a) Below is the SAP ERP production planning process. Identify the correct process for each letter.



(8 marks)

b) Fitter Snacker orders oats in 44,000 lb. batches. Given the following (incomplete) Material Requirement Planning record:

Oats Lead Time = 2 weeks		Week 1	Week 2	Week 3	Week 4	Week 5
Gross Requirements (lb)		18,000	24,323	24,872	18,464	17,938
Scheduled Receipts			44,000			
Planned Receipts						
On Hand	23,635	5,635	25,312	440		
Planned Orders						

i) What Planned Orders will the MRP logic create? (2 marks)

ii) What Planned Receipts quantity will be produced for Week 4? (2 marks)

iii) What On Hand quantity will be produced for Week 4 and Week 5? (2 marks)

Continued...

c) How does the SAP ERP system distinguish between a task, job, position and person?

(6 marks)

(Total: 20 marks)

QUESTION 4

a) Assume Fitter Snacker's (FS) existing information systems are in place. FS has a customer called First State TastyBars. Here is the background data on FS and First State TastyBars:

Today's date	4/20/2001
Current list price, NRG-A bars	1.00/bar
Accounts receivable balance at start of business day, First State TastyBars, as shown on the list available in Marketing	$15,000
Credit Limit, First State TastyBars	$17,000

An order came in from First State TastyBars:

Product	NRG-A
Amount	10 cases (288 bars/case)
Price	List
Ship to	First State TastyBars headquarters
Date desired	4/25/2001
Next invoice number	A1200
Customer Purchase Order Number	FST 1003

There are some documents in FS's system as follows:

Purchase order FST 988 for 3 cases (864 bars) of NRG-A. This order is in the FS sales order-entry program, but Accounting has not been told about it yet.
A check from FST for $5184 was received in yesterday's mail and entered into Accounting's PeachTree program. The check applies to some March 2001 orders. The list of accounts receivable balances that Marketing uses does not reflect this payment.

i. Given the state of FS's systems, will credit be granted or denied on the current order (purchase order FST 1003)? (3 marks)

Continued...

ii. What is the actual First State TastyBars accounts receivable balance (without considering the current order)? (3 marks)

iii. If the FS systems processed transaction data in a more timely way would credit be granted or denied? Why? (3 marks)

b) Describe RFID. What are the advantages of using RFID technology over barcode labels? (6 marks)

c) Describe the material order process in the accompanying figure:

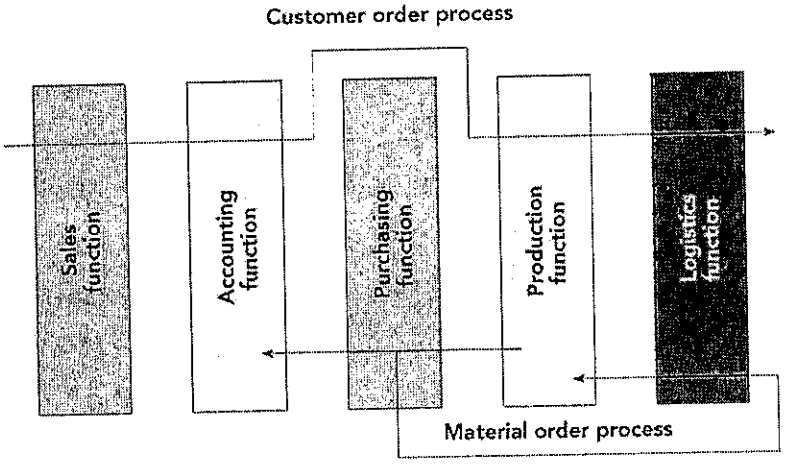


Figure: A process view of business operations

(5 marks)

(Total: 20 marks)

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